

Title (en)

WIRING BOARD, ELECTRONIC DEVICE AND ELECTRONIC MODULE

Title (de)

LEITERPLATTE, ELEKTRONISCHE VORRICHTUNG UND ELEKTRONISCHES MODUL

Title (fr)

CARTE DE CÂBLAGE, DISPOSITIF ÉLECTRONIQUE ET MODULE ÉLECTRONIQUE

Publication

**EP 3846202 B1 20230927 (EN)**

Application

**EP 19856280 A 20190828**

Priority

- JP 2018160533 A 20180829
- JP 2018204113 A 20181030
- JP 2019033655 W 20190828

Abstract (en)

[origin: US2021176855A1] A wiring substrate includes: an insulating substrate including a base portion comprising a through hole having a first opening and a second opening, and a frame portion located on the base portion; and a heat dissipator disposed on a side of the base portion that is opposite to the frame portion so as to block the second opening, wherein an inner surface of the through hole faces a side surface of the heat dissipator with a clearance being provided between the inner surface of the through hole and the side surface of the heat dissipator.

IPC 8 full level

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CPC (source: EP US)

**H01L 23/13** (2013.01 - EP); **H01L 23/36** (2013.01 - EP); **H01L 23/3677** (2013.01 - EP); **H01L 31/02** (2013.01 - EP); **H01L 33/62** (2013.01 - EP); **H05K 1/0209** (2013.01 - US); **H05K 1/021** (2013.01 - EP); **H05K 1/184** (2013.01 - US); **H05K 3/103** (2013.01 - US); **H05K 1/184** (2013.01 - EP); **H05K 2203/049** (2013.01 - EP)

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DOCDB simple family (publication)

**US 11582858 B2 20230214**; **US 2021176855 A1 20210610**; CN 112585744 A 20210330; EP 3846202 A1 20210707; EP 3846202 A4 20220601; EP 3846202 B1 20230927; JP 7300454 B2 20230629; JP WO2020045480 A1 20210902; US 11930586 B2 20240312; US 2023199937 A1 20230622; WO 2020045480 A1 20200305

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**US 201917270096 A 20190828**; CN 201980054292 A 20190828; EP 19856280 A 20190828; JP 2019033655 W 20190828; JP 2020539530 A 20190828; US 202318167216 A 20230210